

node has a first packet data network (PDN) connection; and accepting a request by the node for a second packet data network (PDN) connection based, at least partially, upon receipt of an indication that the second PDN connection request is for a multipath transmission control protocol (MPTCP) use.

**[0048]** In accordance with another aspect, an example embodiment is provided in an apparatus comprising means for determining if a node has a first packet data network (PDN) connection; and means for accepting a request by the node for a second packet data network (PDN) connection based, at least partially, upon receipt of an indication that the second PDN connection request is for a multipath transmission control protocol (MPTCP) use.

**[0049]** In accordance with another aspect, an example method comprises determining if a request by a node for a second packet data network (PDN) connection is for a multipath transmission control protocol (MPTCP) use, where the node has a first packet data network (PDN) connection through a first gateway; and selecting a second gateway for the second packet data network (PDN) connection based, at least partially, upon a determination that the request is for the multipath transmission control protocol (MPTCP) use, where the selecting of the second gateway avoids selection of the first gateway as the second gateway.

**[0050]** In accordance with another aspect, an example embodiment is provided in an apparatus comprising at least one processor; and at least one non-transitory memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus at least to: determine if a request by a node for a second packet data network (PDN) connection is for a multipath transmission control protocol (MPTCP) use, where the node has a first packet data network (PDN) connection through a first gateway; and select a second gateway for the second packet data network (PDN) connection based, at least partially, upon a determination that the request is for the multipath transmission control protocol (MPTCP) use, where the selecting of the second gateway avoids selection of the first gateway as the second gateway.

**[0051]** In accordance with another aspect, an example embodiment is provided in a non-transitory program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine for performing operations, the operations comprising: determining if a request by a node for a second packet data network (PDN) connection is for a multipath transmission control protocol (MPTCP) use, where the node has a first packet data network (PDN) connection through a first gateway; and selecting a second gateway for the second packet data network (PDN) connection based, at least partially, upon a determination that the request is for the multipath transmission control protocol (MPTCP) use, where the selecting of the second gateway avoids selection of the first gateway as the second gateway.

**[0052]** In accordance with another aspect, an example embodiment is provided in an apparatus comprising means for determining if a request by a node for a second packet data network (PDN) connection is for a multipath transmission control protocol (MPTCP) use, where the node has a first packet data network (PDN) connection through a first gateway; and means for selecting a second gateway for the second packet data network (PDN) connection based, at

least partially, upon a determination that the request is for the multipath transmission control protocol (MPTCP) use, where the selecting of the second gateway avoids selection of the first gateway as the second gateway.

**[0053]** In accordance with another aspect, an example method comprises receiving by a node a Management Object (MO), where the MO comprises an indication that a network is prepared for multipath transmission control protocol (MPTCP) use, where the node comprises a first packet data network (PDN) connection; and based, at least partially, upon reception by the node of the indication, transmitting from the node a request for a second packet data network (PDN).

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0054]** The foregoing aspects and other features are explained in the following description, taken in connection with the accompanying drawings, wherein:

**[0055]** FIG. 1 is a diagram illustrating features of an example embodiment;

**[0056]** FIG. 2 is a diagram illustrating some of the features used in the example of FIG. 1;

**[0057]** FIG. 3 is a diagram illustrating messaging steps to establish a MPTCP communication for the example shown in FIGS. 1-2;

**[0058]** FIG. 4 is a diagram illustrating features of another example;

**[0059]** FIG. 5 is a diagram illustrating some of the features used in the example of FIG. 1;

**[0060]** FIG. 6 is a diagram illustrating some of the components shown in FIGS. 1-5;

**[0061]** FIG. 7 is a diagram illustrating an example method;

**[0062]** FIG. 8 is a diagram illustrating an example method;

**[0063]** FIG. 9 is a diagram illustrating an example method;

**[0064]** FIG. 10 is a diagram illustrating an example method; and

**[0065]** FIG. 11 is a diagram illustrating an example method for establishing a second PDN connection when a node already has a first PDN connection.

## DETAILED DESCRIPTION OF EMBODIMENTS

**[0066]** Features as described herein may be provided with a method, software and/or an apparatus. The rules and functionality may be used with multiple access networks for routing flows with MPTCP between a UE and a server. At least some of the rules may be placed in a management object (MO). At least some of the functionality may be executed by a UE, according to assistance of the management object (MO), and supported by the respective functionalities in the radio access network (RAN). Non-limiting descriptions are made herein regarding the RAN so that the PDN gateway, the Mobility Management Entity (MME), a Connection Management functionality, which in some embodiments are in the packet core network, is sometimes referred to as the RAN, because the RAN has the key impact thereto, in the core network.

**[0067]** Referring to FIG. 1, there is shown a diagram illustrating a system 10 incorporating features of an example embodiment. Although the features will be described with reference to the example embodiments shown in the drawings, it should be understood that features can be embodied in many alternate forms of embodiments.